Instructional Methods for the EDNET Distance Learning Teacher

There are a variety of instructional methods and techniques that the distance learning teacher can use in the EDNET classroom. His/her familiarity with the EDNET technology will dictate the level of involvement of the technique and the technology with the students. Below is a list of some successful techniques that have been used in EDNET teaching.

Textbooks, Workbooks, Lab Manuals, Reference Texts, Printed Materials	Text materials used by the teacher and students may form the basis of the curriculum. Often it is the only materials students can have that is "hands on."
Lecture From the Teacher	There are obvious times when the teacher must present basic information about the curriculum. Lecture format provides a direct link to discussions and question-and-answer sessions as well as interaction with the students.
Cooperative Group Discussions	Students need the opportunity to work, discuss, and learn from each other. The teacher can facilitate that process.
Laboratory (Science) Activities, Demonstrations	Science lab activities require considerable forethought and preparation for "remote" students.
Use of Video, Videotapes, Document Camera	Video is the major medium of distance education. The style of presentation, the preparation of materials for the document camera, and use of videotapes must be carefully thought out.
CD-ROM	The teacher or student can use a CD-ROM to enhance the curriculum, both on-air and off-air (asynchronous).
Audiotapes	Used in music in foreign language instruction.
Computer Activities, Internet, E-mail, Simulations	The EDNET multimedia computer has connections to email and to the Internet allowing worldwide access for your class. Preparation and utilization of these resources must be carefully planned out.
Computer Presentation Programs	Desktop presentation programs are available to present textual information in an attractive format that can be saved and later modified on the computer. A great resource for the busy teacher.
Video Conferences	The EDNET distance learning network ties together over 150 different locations throughout the state, allowing access for students and guest speakers to visit with our classes. Plan well ahead for these activities. Coordinate with your LSR (Local Service Representative).

Instructional Design Template (Carla Lane)

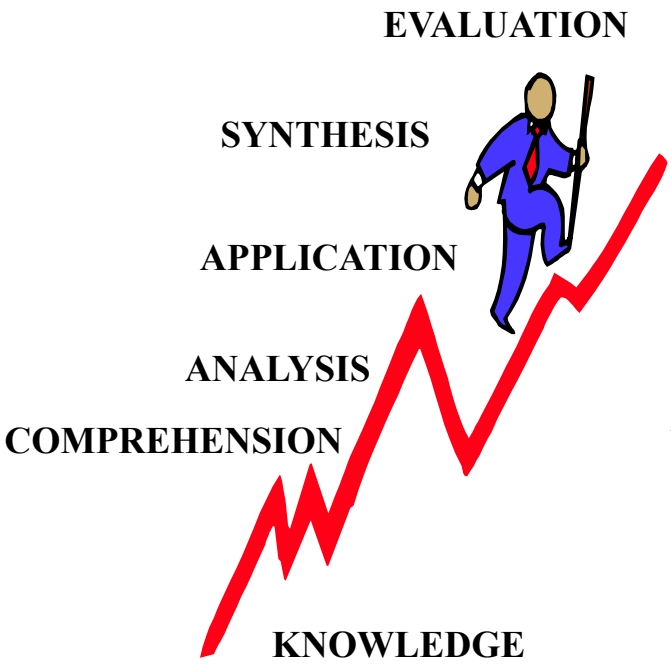
The following is a new method devised to assist the distance learning teacher plan the best type of teaching style to match the requirement of the objective. For example, a teacher can help students work together by following the advice on the chart. In the "People" column there are four checkmarks–those kind of activities will foster "People" skills. Perhaps you would want to do a video conference with small group discussions.

Instructional Design for Distance Learning

*(An activity developed by Dr. Carla Lane)

Method / *Learning Style*	Detail	Num	Qual	Inan	People	Listen	Read	Icon	Dir. Exp.
TEXTBOOK	•						•		
LECTURE	•					•			
DISCUSSION			•		•				
COOP. GROUP					•				
MANIPULATIVES	•			•					•
VIDEO	•					•		•	
CD-ROM	•		•	•		•	•	•	•
WORKSHEETS	•	•							•
SIMULATION	•					•	•	•	•
FIELD TRIP					•	•		•	•
COMP. CONFERENCE	•						•	•	
VIDEO CONFERENCE					•	•			

Bloom's Taxonomy of Educational Objectives



Behavior objectives have been used by teachers for years to help them establish precise goals for student achievement and ways of measuring them objectively. We would like to encourage you to use specific objectives for your distance learning lesson. These objectives should be shared with the students and your facilitators at the beginning of the course. Distance learning students often need the help of a course outline (or syllabus) to reinforce what you are doing in your classroom. See the examples of course outlines and objectives in Appendix 8 in *EDNET Users Manual*. Below are definitions of the six levels of Bloom's Taxonomy:

Here is what students "do" at each rung of the ladder:

1. By ***knowing*** something, students gain basic information, sometimes called "mere knowledge," typically by rote learning. They can't do much with it beyond regurgitating facts.

2. By ***understanding*** something, students see some basic relationships among the various facts.

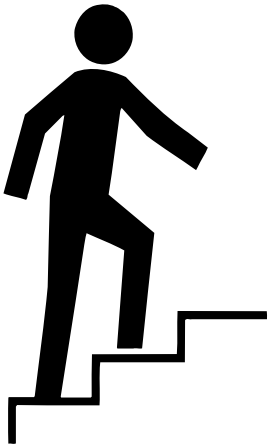
3. By ***applying*** something, students "take it out for a test drive in the real world."

4. By ***analyzing*** something, students chop it up and look closely at it.

5. By ***synthesizing*** something, students see the bigger picture, how this knowledge fits into an overall scheme, and perhaps create something new of their own with it.

6. By evaluating something, students make judgments about the value of something: "This is a good example of such and such," "This is a worthy performance," "This criterion should be worth three times as much as that," and so on. At this level, the students put all the principles they've learned into practice.

Bloom's Taxonomy of Educational Objectives



Setting educational objectives for your lesson plans has great benefits for teachers and students alike. The distance learning teacher will quickly find that he or she must be well organized and have carefully planned, paced, and varied activities that lead to a strong curricular goal. The distance learning student, likewise, likes to know where the teacher is heading and what they are expected to know and accomplish in class. A carefully constructed class outline and syllabus should take into account Bloom's Taxonomy of Educational Objectives. The six levels might not follow one right after the other during the class but might be spread out over several sessions.

Distance Learning and Bloom's Taxonomy. This example of using Bloom's Taxonomy would help distance learning teachers in developing an instructional design for their curriculum. This example might be for a high school physics class. It is a unit of study on *Force*.

Bloom's Taxonomy in a Traditional Classroom.	**Bloom's Taxonomy in a Distance Learning Classroom.**
1. **Knowledge**: Define the physics term *force.*	1. Call on several students at different sites to come up with definitions of force. Discuss and come up with a suitable definition.
2. **Comprehension***:* Show how force is calculated.	2. Have group discussions for five minutes. Give each group a sample force problem to solve and have each group demonstrate it.
3. **Application**: Set up a lever arm with a ruler and blocks of wood and demonstrate what force is.	3. Demonstrate or have a lab activity in "front of the camera" on levers, pulleys, wedges, machines.
4. **Analysis**: Explain why a pulley wheel multiplies force but sacrifices distance.	4. Make a Powerpoint slide presentation on mathematics of force and efficiency of a block and tackle or friction on an inclined plane.
5. **Synthesis**: Demonstrate how an inclined plane is like a screw.	5. Appoint each site and site facilitator to
6. **Evaluation**: Compare the efficiency of an inclined plane to lift an object compared to a block and tackle assembly.	

(Benjamin S. Bloom, Ed., *Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook 1: Cognitive Domain,* New York: McKay, 1953)